

City of Greenbelt, Maryland Memorandum

To: City Council
From: Michael McLaughlin, City Manager *MM*
David Moran, Assistant City Manager *DEM*
Kenny Hall, Director of Public Works
Jim Sterling, Assistant Director of Public Works
Joe Doss, Parks Supervisor
Date: July 23, 2014
Re: Initial Draft – Playground Surfacing Action Plan

This report is a recommended action plan regarding playground surfacing. This summary and recommendation follows Council's June 18, 2014, work session on the matter.

Summary

As a result of the work session, staff was tasked with: 1) update the playground inventory; 2) make a recommendation on a plan to replace the shredded rubber surfacing which is in place at nine (9) playgrounds; 3) recommend a long-term strategy on what surfacing material(s) the City ought to use in the future; and 4) check the temperature of surfacing and equipment at City Playgrounds.

1. Playground Inventory

Attached is a new "Playground Inventory" document. This document provides key data about the 36 City-Maintained playgrounds.

2. Replacement of Shredded Rubber Surfacing

There are nine (9) playgrounds maintained by the City that have shredded rubber surfacing – one (1) is located on City property, two (2) are on Greenbelt Homes, Inc. property, one (1) is on Greenwood Village property and five (5) are on Windsor Green property. This breakdown is noteworthy since at the June 18 work session, Mr. Derek Thompson of Windsor Green noted that to the best of his knowledge, the Windsor Green community is satisfied with the shredded rubber surfacing.

The Public Works Department has an estimate of \$90,000 to remove and dispose of the shredded rubber material and replace it with engineered wood fiber (EWF). The cost is important for two reasons: 1) it is substantial - \$90,000 is three times the amount the City annually budgets for playground surfacing; and 2) eight (8) of the impacted playgrounds are covered by the City's playground agreement which requires the other party (GHI, Greenwood Village and Windsor Green) to pay 25% of the cost of replacing surfacing material.

In this situation, staff recommends a three step approach. One, the shredded rubber surfacing at the playground behind 1 Court Southway, which is City property, be replaced with EWF in the next three months. Two, discuss the issue with GHI, Greenwood Village and Windsor Green, and get their feedback on the issue of shredded rubber mulch and whether they want it removed under the regular cost sharing arrangement of the playground agreement. Three, develop a replacement schedule based on the responses from the parties and the City's ability to fund its share (75%).

3. Long Term Approach

There are six playground surfacing materials currently in common use:

1. Poured in Place
2. EWF
3. Rubber Tiles
4. Shredded Rubber
5. Bonded Rubber
6. Artificial Grass

Based on public discussions to this point, the last three are not going to be further considered because Council has already indicated a concern about shredded rubber; bonded rubber was deemed undesirable at previous work session; and artificial grass is relatively new and requires the use of crumb rubber, which is a material that has been subject to study and health concerns have been raised.

This matter has been reviewed by the Park and Recreation Advisory Board (PRAB), Public Safety Advisory Committee (PSAC) and Youth Advisory Committee (YAC). Both PSAC and YAC recommended that Engineered Wood Fiber (EWF) be the preferred surface. Among its recommendations, PRAB recommended all shredded rubber surfacing be removed, the City plan for a variety and balance of surfacing materials, and make the public aware of their surfacing choices by informing them of the different surfacing materials and location of the 36 playgrounds.

The staff recommendation is similar to PRAB's. Staff believes there is no one right answer since each material has its pros and cons. Staff would recommend a variety of materials be used and be determined on a case-by-case basis based on criteria such as the location of a playground, geography of the area (e.g. – shaded/ not shaded), what surfacing materials are used in nearby playgrounds, the type of equipment, and the interests of the neighborhood.

4. Temperature Check

At the June 18 work session, Ms. Susan Stewart presented information on the temperatures of playground surfacing materials and nearby materials. According to temperature readings which she gathered, poured in place surfacing was 156 degrees on a hot sunny day with nearby surfaces also being quite hot.

Council directed staff to conduct additional readings at playgrounds. Attached is the data gathered on July 28, August 1, 7 and 8, 2014 at six playgrounds. There were two playgrounds each using poured in place, shredded rubber and engineered wood fiber.

City readings at Greenspring Park, where the surface is poured in place, were similar to Ms. Stewart's temperature readings. In brief, each of the playgrounds surfacing and equipment got hot when in full sun, poured in place was the hottest. Temperatures moderated greatly when weather conditions were cloudy. Whether a playground was shaded, did not have a consistent impact, likely due to an areas having been sunny previously.

At the August 11, 2014, Council meeting, Mayor Pro tem Davis showed signs used in Virginia that warn users about potentially "hot" metal equipment. It is recommended that these be installed in all City playgrounds.

Need for Additional Staff

In 2004, when the City entered into new Playground Agreements with Greenbelt Homes, Windsor Green and Greenwood Village, staff recommended that an additional staff person was necessary in order to properly maintain the additional 14 playgrounds covered by the agreements. This position was proposed in the FY 2006 City Budget, but not approved due to fiscal constraints.

A major rationale for installing shredded rubber surfacing in most of the playgrounds renovated since 2004 was that this surfacing was easier for City staff to maintain. It does not deteriorate or develop mold/fungus, and has not required any replenishment or topping off. This additional position is needed now to properly maintain our current playgrounds and surfacing. Since 2005, staff has not been able to inspect and maintain EWF playground surfacing as often as needed.

Converting nine (9) shredded rubber playgrounds to EWF will only exacerbate this problem. If these 9 playgrounds are going to be converted to EWF, the additional playground maintenance position recommended in 2006 should be added in FY 2016 and the line item for annual EWF top-offs of EWF should be increased by 40% (\$12,000).

Playground Inventory

8/15/2014

#	Location	Owner	Surfacing	Age		Square Feet	Last Top Off	Renovation	
				Range	Year Built/ Renovated			Cost	Cost
1	3 Court Gardenway	City	Poured In Place	2-12	2001	2067	N/A		
2	39 Court Ridge	City	Poured In Place	5-12	2001	1700	N/A		
3	Fayette Place	City	Engineered Wood Fiber	2-5	2002	2600	10/1/13		
4	2 Court Southway	City	Engineered Wood Fiber	2-5	1970's	1407	7/10/13		
5	Breezewood Drive	City	Engineered Wood Fiber	2-5	2010	1886	7/12/14		
6	Springhill Lake Recreation	City	Engineered Wood Fiber	5-12	2003	3000	10/8/12		
7	Greenspring Park	City	Poured In Place	5-12	2014	1630	N/A		\$81,900
8	Schrom Hills Park	City	Engineered Wood Fiber	2-12	2004	11000	7/1/2013		
9	15 Court Laurel Hill	City	Engineered Wood Fiber	2-5	2001	2375	10/1/13		
10	Westway	City	Engineered Wood Fiber	2-12	2002	5333	7/29/13		
11	1 Court Southway	City	Shredded Rubber	5-12	2007	3005			
12	A Block	City	Poured In Place	2-5	2012	2035	N/A		\$55,900
13	2 Court Northway	City	Engineered Wood Fiber	5-12	2001	2885	3/1/13		
14	73 Court Ridge	City	Engineered Wood Fiber	2-12	2005	3300	7/6/14		
15	Attick Park	City	Engineered Wood Fiber	2-12	2002	15430	4/1/13		
16	Community Center	City	Engineered Wood Fiber	2-12	1990	6000	4/1/12		
17	5 Court Gardenway	City	Engineered Wood Fiber	2-12	2005	1500	7/1/11		
18	St. Hughs	City	Engineered Wood Fiber	5-12	2003	2500	8/1/11		
19	Lastner and Ivy	City	Engineered Wood Fiber	2-12	2001	6130	2/1/13		
20	2 Court Gardenway	City	Engineered Wood Fiber	5-12	2004	3863	9/1/13		
21	Plateau/Ridge	City	Engineered Wood Fiber	2-12	2003	3900	6/5/11		
22	Belle Point	City	Poured In Place	2-5	2014	2884	N/A		\$98,300
23	8 Court Southway	Greenbelt Homes Inc.	Engineered Wood Fiber	2-5	1980's	2389	11/15/12		
24	38 Ridge	Greenbelt Homes Inc.	Engineered Wood Fiber	5-12	2002	2500	10/15/11		
25	7 Court Southway	Greenbelt Homes Inc.	Shredded Rubber	5-12	2011	2000			\$45,000
26	44 Court Ridge	Greenbelt Homes Inc.	Engineered Wood Fiber	2-12	2001	2400	6/15/14		
27	2 Court Research	Greenbelt Homes Inc.	Shredded Rubber	5-12	2006	2000			
28	2 Court Laurel Hill	Greenbelt Homes Inc.	Poured in Place	2-12	2013	3500	N/A		\$160,000
29	4 Court Plateau	Greenbelt Homes Inc.	Engineered Wood Fiber	2-5	2002	1500	10/15/13		

Playground Inventory

8/15/2014

#	Location	Owner	Surfacing	Age		Square Feet	Last		Renovation Cost
				Range	Year Built/ Renovated		Top	Off	
30	Frankfort	Windsor Green	Shredded Rubber	2-12	2006	5576			\$25,000
31	South Ora Court	Windsor Green	Shredded Rubber	5-12	2007	2800			\$27,000
32	Canning Terrace	Windsor Green	Shredded Rubber	2-12	2008	5053			\$82,120
33	Mandan Road	Windsor Green	Shredded Rubber	5-12	2010	1680			\$57,410
34	Jacobs Drive	Windsor Green	Engineered Wood Fiber	5-12	1976				
35	Ora Glen	Windsor Green	Shredded Rubber	2-5	2009	3140			\$62,300
36	Greenwood Village	Greenwood Village	Shredded Rubber	5-12	2009	1155			\$45,990

Playground Inventory

8/15/2014

Statistics for City Maintained Playgrounds

Tentative Renovation Priority

(Subject to Funding Availability)

<u>Age Range</u>		<u>Location</u>	<u>Fiscal Year</u>
Number of 2-5 Playgrounds	9		
Number of 5-12 Playgrounds	14	Schrom Hills Fitness Area	2016
Number of 2-12 Playgrounds	13	Community Center	2017
		8 Court Southway	2018
		Jacobs Drive Replace-Relocate	2019
		2 Court Southway	2020
<u>Surfacing</u>			
Engineered Wood Fiber	21		
Shredded Rubber	9		
Poured In Place	6		
<u>Ownership</u>			
City Owned	22		
Privately Owned	14		
Greenbelt Homes, Inc.	7		
Windsor Green	6		
Greenwood Village	1		
Total Square Feet of Playground Area	122,123		
Total Spent on Renovations Since 2007	\$740,920		

July 28, 2014

Location	Schrom Hills	Greenspring	Ora Glen Court	7 Ct. Southway	Laurel Hill	Attick Park
Surfacing	Wood Fiber	Poured in Place	Shredded Rubber	Shredded Rubber	Poured in Place	Wood Fiber
Air Temperature	81	82	81	81	81	81
Time	12:50 PM	12:59 PM	1:08 PM	1:20 PM	1:30 PM	1:55 PM
Weather Conditions	Sunny & Windy	Sunny & Windy	Cloudy	Sunny & Windy	Sunny & Windy	Sunny & Windy
Shade Level	Full Sun	Full Sun	Full Sun	Partly Shaded	Partly Shaded	Partly Shaded
Surfacing Temperature	118	162	126	84	128	129
Slide Temperature	111	141	124	85	89	96
Metal Post Temperature	105	100	107	84	82	106
Grass Temperature	96	107	83	92	86	96
Concrete Temperature	114	107	121	Asphalt = 120	93	120

August 1, 2014

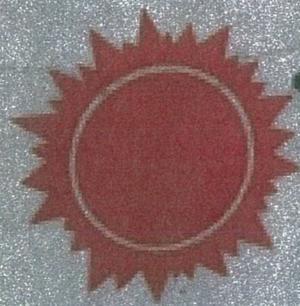
Location	Schrom Hills	Greenspring	Ora Glen Court	7 Ct. Southway	Laurel Hill	Attick Park
Surfacing	Wood Fiber	Poured in Place	Shredded Rubber	Shredded Rubber	Poured in Place	Wood Fiber
Air Temperature	77	77	77	77	77	77
Time	1:15 PM	1:25 PM	1:38 PM	1:03 PM	12:47 PM	12:40 PM
Weather Conditions	Cloudy & Lt. Wind	Cloudy	Cloudy	Cloudy & Lt. Rain	Overcast & Rain	Overcast & Lt. Rain
Shade Level	Full Sun	Full Sun	Full Sun	Shaded	Shaded	Full Sun
Surfacing Temperature	90	106	114	82	78	80
Slide Temperature	85	96	99	81	75	78
Metal Post Temperature	86	91	88	80	75	78
Grass Temperature	86	79	92	81	73	77
Concrete Temperature	88	85	99	88	74	80

August 7, 2014

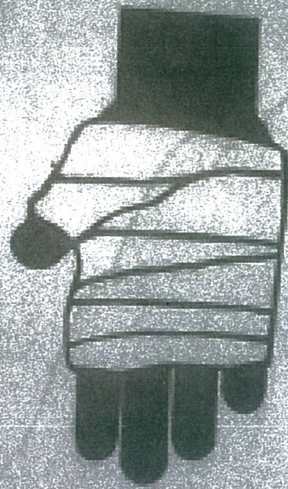
Location	Schrom Hills	Greenspring	Ora Glen Court	7 Ct. Southway	Laurel Hill	Attick Park
Surfacing	Wood Fiber	Poured in Place	Shredded Rubber	Shredded Rubber	Poured in Place	Wood Fiber
Air Temperature	74	74	74	75	76	76
Time	10:30 AM	10:37 AM	10:44 AM	10:54 AM	11:04 AM	11:13 AM
Weather Conditions	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny
Shade Level	Full Sun	Partly Shaded	Full Sun	Partly Shaded	Partly Shaded	Full Sun
Surfacing Temperature	106	133	126	122	130	106
Slide Temperature	105	129	135	110	82	129
Metal Post Temperature	103	107	102	99	82	101
Grass Temperature	94	102	92	96	72	99
Concrete Temperature	92	98	Asphalt=104	109	85	105

August 8, 2014

Location	Schrom Hills	Greenspring	Ora Glen Court	7 Ct. Southway	Laurel Hill	Attick Park
Surfacing	Wood Fiber	Poured in Place	Shredded Rubber	Shredded Rubber	Poured in Place	Wood Fiber
Air Temperature	81	81	81	81	81	81
Time	12:48 PM	12:58 PM	1:13 PM	1:42 PM	1:31 PM	2:19 PM
Weather Conditions	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny
Shade Level	Full Sun	Partly Shaded	Full Sun	Shaded	Partly Shaded	Full Sun
Surfacing Temperature	127	152	142	130	133	117
Slide Temperature	113	123	121	87	89	104
Metal Post Temperature	107	97	93	82	82	100
Grass Temperature	111	103	113	87	91	92
Concrete Temperature	117	99	118	123	86	104



PREVENT BURNS ON
HOT METAL
PLAYGROUND EQUIPMENT



The U.S. Consumer Product Safety Commission
Advises that Parents Should Check for Hot Surfaces
on Metal Playground Equipment before
Allowing Young Children to Play on it.

